# NEIGHBORHOOD WIRELESS PROTOCOL WITH SWITCHABLE

## AD HOC AND WIDE AREA NETWORK COVERAGE

### Abstract

A method of communicating in and around a localized wireless coverage area according to the present invention provides cellular coverage to a neighborhood cell (18) in which service might otherwise not be possible or in which a high percentage of calls would otherwise end up being dropped. Specifically, a neighborhood cell (18) is defined by either one or more fixed last hop nodes (20) or mobile last hop nodes (120). If a source mobile subscriber unit (12) communicates with a destination unit through wide area wireless network coverage, the source mobile subscriber unit (12) is handed over to ad hoc wireless network coverage either automatically or upon the occurrence of a high frame error rate when it enters the neighborhood cell (18) to maintain communication with the destination unit. If the source mobile subscriber unit (12) is already communicating through ad hoc wireless coverage within the neighborhood cell (18), it is handed over to wide area wireless network coverage when it exits the neighborhood cell (18) to maintain communication with the destination unit.